REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 1-20 have been canceled in favor of new claims 21-27.

Claims 1-4, 13-15, 17, and 19 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Shintani (JP 11-080952). Claims 1, 3, and 6 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Hidaka (JP 10-106441). Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani in view of Kawakusu (JP 2000-277009). Claim 12 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani in view of Okuyama (JP 2001-243886). Claims 7, 8, 16, 18, and 20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani in view of Hidaka. Claim 9 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani in view of Hidaka and Furuya (JP 09-295894). Claims 10 and 11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Shintani in view of Hidaka and Okuyama. These rejections are traversed for the following reasons.

The present invention relates to a method of manufacturing plasma display panels (PDP), in particular, the method advantageously stabilizes the physical properties of magnesium oxide (MgO) that is used as a protective layer covering a dielectric layer formed on a front glass substrate of the PDP. The present invention also relates to a manufacturing apparatus.

Thus, the claims of the present application include recitations directed to a process for forming a metal oxide film made from magnesium oxide (MgO) onto a substrate of the PDP. As recited in the claims, the process for forming the metal oxide film controls a degree of vacuum in a deposition room within a certain range, introduces at least one gas selected from the group consisting of oxygen, water, hydrogen, carbon monoxide, and carbon dioxide into the deposition room, and controls a partial pressure of the gas in the deposition room within a certain range for controlling oxygen deficiency on the metal oxide film within a given range.

An amount of oxygen deficiency in the metal oxide film made from MgO makes a difference in the properties of the protective layer. The present invention thus controls the amount of oxygen deficiency within the given range so as to stabilize the properties of the protective layer. This control

method introduces oxygen into the deposition room for reducing an amount of oxygen deficiency and reducing an amount of dangling bonds. Further, as recited in claims 22-26, the method introduces water, hydrogen, carbon monoxide, or carbon dioxide into the deposition room for increasing the oxygen deficiency in the metal oxide film. To be more specific, during the deposition, these gasses are introduced as appropriate into the deposition room, and yet a controllable range of a partial pressure is determined for each one of the gasses, so that the gasses are controlled so that their partial pressures are within a certain range. The amount of oxygen deficiency can thus be controlled within the given range. The processes discussed above allow controlling of the amount of oxygen deficiency in the protective layer within the given range, and result in a protective layer that has stable properties.

The references applied by the Examiner, i.e., Shintani (JP 11-080952), Hidaka (JP 10-106441), Kawakusu (JP 2000-277009), Okuyama (JP 2001-243886), and Furuya (JP 09-295894), disclose oxygen, hydrogen, carbon monoxide, and carbon dioxide *per se* as gasses to be used, but these references do not disclose or suggest controlling oxygen and such other gasses independently as recited in the claims of the present application. To be more specific, the applied references do not disclose or in any way suggest any technique of "introducing at least one gas selected from the group consisting of oxygen, water, hydrogen, carbon monoxide, and carbon dioxide into the deposition room; and controlling a partial pressure of the gas introduced into the deposition room within a certain range for controlling an amount of oxygen deficiency in the metal oxide film within a given range" as recited in claim 21, the specific controlling of the partial pressure of the individual gasses as recited in claims 22-26, or "a gas-introducing means for introducing at least one gas selected from the group consisting of oxygen, water, hydrogen, carbon monoxide, and carbon dioxide into the deposition room; ... and "a control means for controlling an amount of the gas to be introduced into the deposition room and an amount of evacuation from the deposition room based on information supplied from partial-pressure detecting means and information supplied from degree of vacuum detecting means such that the partial pressure of the gas and the degree of vacuum in the deposition room can fall within a given range" as recited in claim 27.

Because of the distinctions discussed above, it is clear that none of claims 21-27 can be considered anticipated by Shintani (JP 11-080952) of Hidaka (JP 10-106441) under 35 U.S.C. § 102(b), nor would the inventions of any of claims 21-27 have resulted, or in any way been considered obvious to a person having ordinary skill in the art, from any combination of Shintani (JP 11-080952), Hidaka (JP 10-106441), Kawakusu (JP 2000-277009), Okuyama (JP 2001-243886), and Furuya (JP 09-295894) under 35 U.S.C. § 103(a). Therefore, it is submitted that claims 21-27 are allowable over the prior art of record.

In view of the above, it is submitted that the present application is in condition for allowance. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues to expedite issuance of this application.

Respectfully submitted,

Michihiko TAKASE et al.

/Jeffrey R. Filipek/
2008.11.26 14:29:36 -05'00'

By _____

Jeffrey R. Filipek
Registration No. 41,471
Attorney for Applicants

JRF/fs
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
November 26, 2008